PRENTICE COMPUTER CENTRE

UNIVERSITY OF QUEENSLAND, ST. LUCIA, QUEENSLAND, AUSTRALIA. 4067.

NEWSLETTER

N-292 September 1984

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Authorized by the Director of the Computer Centre

COMPUTING SUPPORT CENTRE FOR UNIVERSITY OF QUEENSLAND AND GRIFFITH UNIVERSITY

Principal Service Centres

	Extensions
Operations Manager	3471
Contract Programming & Feasibility Studies	3944
System Status Automatic Answering	3101
General Enquiries & Course Enrolments	3018
Training & Courses	3021
Dial-up modem numbers	(300 bps) 3772977
	(1200 bps) 3772922

Consulting

PROBLEM AREA	MAIL BOX	NAME AND EXTENSION	
Operations and Programming			
Accounts	ACCOUNTS	Carol Walker	2188
Cobol	COBOL	Porl Gordon	2953
Commands, system use and probs	COMMANDS	Ian Otto	4075
		Greg Lehmann	3020
Database	DATABASE	Brett Peterson	2836
		Marie Bultreys	2835
Fortran	FORTRAN	Noela Meier	2952
Graphics	GRAPHICS	Mark Williams	2921
IBM HELP Desk	HELP	Christine Gibson	3941
Micros	MICROS	Peter Akers	2951
Network	NETWORK	Bryan Claire	4078
		Arthur Hartwig	4079
Operations	OPERATIONS	Senior Operator	3212
PDP-11 Software	PDP11	Danny Smith	2921
Program Library	LIBRARY	Lee MacDonald	3943
Statistics Packages	STATISTICS	Barry Costin	3022
Text processing, Typesetting	TEXT	Andrew Broughton	2837
		Porl Gordon	2953
Non-specific problems	OPERATIONS	Senior Operator	3212
Engineering and Maintenance			
Development and communications	ENGIN	Graham Rees	3288
Mini/Micro support	ENGIN	Alan Langdon	4018
		Martin Nicholls	3942
Terminal, line & mini probs	MAINT	Maralyn Kenley	3938
Griffith University:			
Consulting			7682
Computer Services			7560
Computing Co-ordinator			7561

Terminals, CDN & Equipment Pricing

For prices on microcomputers, terminals, line charges, computer bits and pieces, type HELP PRICES on your terminal. This will provide appropriate menus.

1. Newsletter Summary

This newsletter is arranged to group items according to the responsibilities of Sections within the Centre. The name and telephone extension of the Section Leader is shown.

- The VAX 11/780 is not available from 0700 hours to 1400 hours each Monday. This time is required for weekly maintenance and general housekeeping and allows the system to be available on an uninterrupted basis at other times.
- The Centre backs up the public disk structures on all central systems weekly. For systems other than IBM, files which are changed are backed up daily. As yet we have not developed an incremental backup system for the IBM system. Private disk packs are backed up at user request and at a charge. Please contact the Operations Manager if you require assistance.
- You are reminded that unless advice is received on the appropriate form project programmer numbers expire each year on 24th December.
- PASSWORDS should be changed frequently. The procedures for changing passwords on each system are provided.
- Users of the IBM 3083 may now arrange for magnetic tapes to be mounted by command. Tape labelling and password requirements are explained.
- Following an evaluation (which included user representatives) the Statistical Analysis System (SAS) has been implemented on the IBM 3083 system. It should be noted that SPSS will not be available on the IBM system.
- The MICOM 600 Circuit Switch has been upgraded to meet growth in line connections. Departmental circuit switches can now be connected to the central circuit switch by a high speed trunk operating at 1.5 million bits/sec.

  The central MICOM circuit switch is taken out of service the first working day of each week from 0700 to 0800 hours for testing.
- The Centre has been putting special efforts into improving the reliability of the central systems and the network. The major persistent problem is an intermittent fault somewhere in the TU45 Magnetic Tape System.
- The RSX-11M operating system will continue to be supported by DEC with maintenance updates and new device support as appropriate but no new major development work will be performed on this operating system. Future development work by DEC will be on the new RSX-11M-Plus operating system.
- Details are provided of Computer Centre courses during September and October.
- Further information is provided on the application of computers in the Chemistry Department.

Director
extension 2189

2. Operations – Sandra Campbell, ext. 3471

2.1 Changes in VAX 11/780 Availability

Recently the VAX 11/780 UQVAX:: (node 3) availability was changed from a 23 hour/day basis to a 6 day/week. That is, scheduled maintenance is now from 0700 to 1400 hours each Monday otherwise the system is available continuously 24 hours/day. We received a deal of criticism for this change and I thought a word of explanation would help place those early Monday users. There are two main reasons for the change:

1. Maintenance is much easier in a block of time rather than 5 x 1 hour periods. In fact, maintenance per week is now about 4 to 5 hours. The remainder of the time is used by Operations for system backup and other housekeeping functions which cannot be executed on-line at present (these functions were previously performed on Friday evening).
2. Some research applications now on the VAX require to run for a few days uninterrupted. Research work is a major emphasis for the VAX and so we felt the change was worthwhile for these users.

No doubt these arrangements will not suit all VAX users and we apologise if this caused any major inconvenience. However, our overall aim is to provide a more reliable system with high availability.

Sandra Campbell
extension 3471

2.2 Disk Pack Backup Facilities

The Centre provides a backup system for public structures in the form of:

Weekly

KA & KL	Total public structure backup every Saturday morning.
VAX	Total public structure backup every Monday afternoon with the exception of public holidays in which case the procedure will be performed on the Tuesday.
IBM	Total public structure backup every Wednesday.

The weekly backup on the KA and KL is kept for 3 weeks and for 4 weeks on the IBM and VAX systems.

Daily

A copy of all files accessed since the previous day will be taken each evening for the KA, KL and VAX systems. This daily backup is kept for one week.

Currently there is no incremental backup facility available on the IBM system.

Private Packs – KA, KL & VAX

For those clients with private disk packs a backup service is available on request. This service is provided at cost and clients with private packs are strongly advised to avail themselves of it, as loss of data through accident or malfunction can prove costly.

The Centre will gladly advise on the appropriate backup procedures for each

private pack, bearing in mind both security and cost.

Sandra Campbell
extension 3471

2.3 Expiry Date on Project Programmer Numbers

On 24 December each year all PPN's on the DEC-10's and UIC's on the VAX expire, unless the Centre has been notified in writing that a PPN/UIC is required for another year. *The term "expire" means that all files owned by that PPN, both on-line and off-line, are deleted, any balance of commitment is taken to 0 and PPN and charge code are deleted from the system.*

As you can imagine then, it is imperative that if you intend to keep using your account for the following year you must complete the "change of expiry date" form, prior to 24 December each year. Separate forms for KA/KL and VAX users are at the Accounts office and attached here.

We do this not to make life difficult for you, but merely to keep disk space clear and overheads down. Each year many people leave the University, go away on the Special Studies Programme or finish post graduate research and omit to notify us that they have finished with their account. Expiring accounts is our way, then, of keeping the system operating efficiently for the user's continued benefit.

Carol Walker
extension 2188

3. Software Maintenance – Ian Burgess, ext. 4074

3.1 Security of your Account

From time to time it is necessary to remind users of their responsibility to ensure the security of their accounts. If your password is not secure, neither are your files or your funds.

Points to note:

1. Change your password often, especially if using a public terminal.
2. Try to use at least six letters or digits in your password. This makes the task of guessing it, or of reading your fingertips as you type in the password, as hard as possible. Passwords may consist of letters (case not significant), numbers, $ (dollar sign), and _ (underscore).
3. Avoid obvious passwords. These include your initials, parts of your name, your spouse's name, your car registration, or your telephone number.
4. Never leave a terminal with a job logged in. This is important even in offices, since sensitive accounts may be in use.
5. Do not leave the terminal until the log out sequence is complete. If there are too many files the log out sequence may abort and leave the job logged in.

To change your logon password:

On the IBM system, log in and then use

DIRM PW

On the KL and KA systems, use

.LOGIN ppn/PASSWORD

On the VAX system, log in and then use

$ SET PASSWORD

For each of the above systems, you will then be prompted to enter both your current password and your new password.

In summary, while we continually monitor the systems to detect abuse, you as users must also take care.

So go on, try changing your passwords now!

Noela Meier
extension 2952

4. Software Development – Allan Woodland, ext. 2935

4.1 Magnetic Tape Facilities on the IBM 3083E System

Up until now it has not been possible for users on the IBM 3083 system to mount magnetic tapes. Several systems for handling magnetic tapes have been evaluated and the one offering the most advantages has been installed. This system is called VLIB (VM/CMS Tape Library Facility) and it is now available for you to use.

VLIB is an IBM supplied package which maintains a data base of details on all magnetic tapes used on a VM/CMS system. Tapes used with VLIB should normally be labelled. However, this is not mandatory as, for example, tapes from other installations may very well be unlabelled. A tape label is basically a special piece of information written at the beginning of the tape which contains details such as the "name" of the tape (its volume identification). Having this special information available enables the package to check that the correct tape is mounted, thus ensuring that your data is secure from being read by unauthorised people and of being inadvertently overwritten. VLIB also allows for password security on tape data. If passwords are used you must specify the correct password or else the mount will not complete successfully. Commands are available for authorised personnel to control and manage the entire library. VLIB runs as a disconnected virtual machine, and maintains a data base file of tape details. When you give a command to change information in the data base VLIB will update the file (provided it is a permissible command). When a mount request is given VLIB will check that access to the particular tape is allowed, verify the password if necessary, and if everything is correct send a message to the operator console requesting that the tape be mounted on the drive. After the tape has been mounted control is passed back to VLIB which will check the tape label (if one is present) and, provided the label matches the volume identification given in the mount request, it will assign the drive to you. If the label does not match then the drive is detached, the tape unloaded from the drive, and the operator notified.

Tapes are identified by a six character volume identification consisting of two upper-case characters ("CC" here) and four digits (0001 through to 9999). It is also possible to have a tape identified as SCRTCH. If you request that a scratch tape be mounted VLIB will check its data base to see if any are available and if so notify the operator of which tape to use. Each tape is owned by a particular OWNER (this will be a privileged Computer Centre userid) and may be used by the userid specified in the data base as the primary USER. As well, other people may use the tape if they know the appropriate password (or the password is ALL). An owner may

change all of the details in the data base pertaining to a tape, whereas the primary user may only change a subset of this information.

It is possible to mount tapes defined as "foreign" – these are tapes that come in occasionally for which there will be no information in the tape data base. VLIB defines a tape as foreign provided its volume identification is not of the standard form (CCnnnn).

VLIB informs the operator of pending mount requests by sending a message to the operator console. The message contains details of request number and other pertinent information. The request number is used by the operator to reply to VLIB when the tape is actually mounted on the drive.

A MOUNT command is provided for communication between the CMS user (you) and the person who physically manages the volumes (i.e. operations staff). There is a CHANGE command available to change details about your tapes in the data base, a QUERY command which gives details on pending mount requests and the tapes you have access to, and a SCRATCH command which is used if you wish to release one of your tapes back to the control of VLIB (i.e. no longer be the primary user). Except for the MOUNT command all VLIB commands have the syntax 'VLIB <command>'. This means that if you wanted to give the QUERY command to see which tapes you were the primary user of you would have to type VLIB QUERY USER ALL. Full details on all VLIB commands can be obtained from the INFO system, as described in the last newsletter. To obtain information on MOUNT you need only type INFO MOUNT.

If you require further information on VLIB you should contact the IBM HELP desk on extension 3941.

Andrew Broughton
extension 2837

4.2 Statistical Analysis System on the IBM 3083E

When it was decided to purchase the IBM 3083 computer system, one of the factors in this decision was the fact that this would enable a wealth of different software to be made available. A committee comprising Mr A. Barnes (Statistical Consultant to the Science Faculty), Mr M.J. Gibbings (Department of Economics) and Mr A.J. Bird (Prentice Computer Centre) reviewed currently available statistical packages and determined that SAS was now probably the most technically advanced package and was available for the IBM machine. This package, developed at North Carolina State University is now installed and available on the IBM machine. SAS is very flexible with a wide range of statistical and data management procedures. In fact this package in other VM sites has been found to be more popular and superior to the SPSS system.

The basic SAS system provides tools for information storage and retrieval, data modification and programming, report writing, statistical analysis, and file handling. This basic system has been installed here and is available by giving the SAS command.

We also currently have several other SAS products available for evaluation. If you are interested in the facilities they provide you should investigate them, and if you feel they are useful to your applications contact Allan Woodland on extension 2935.

The other SAS products available are:

(a) SAS/GRAPH – device intelligent colour graphics for business and

research applications,

(b) SAS/ETS — expanded tools for business analysis, forecasting and financial reporting,

(c) SAS/FSP — interactive menu-driven facilities for data entry, editing, retrieval of SAS files, and letter writing on IBM series 327x series terminals, and

(d) SAS/OR — procedures for business planning and scheduling using operations research tools.

The Bookshop is considering stocking some of the wide range of SAS documentation which is available. Online help is available by giving the INFO SAS command. Should you desire more information on SAS and its facilities contact Christine Gibson on extension 3941 or Barry Maher on extension 3021.

Andrew Broughton
extension 2837

5. Engineering and Communications Services — Graham Rees, ext. 3288

5.1 Reliability of Central Hosts & Communications Network

We have been placing some emphasis on the reliability of central hosts and the communications network recently which we believe is paying off in improved availability of all system.

The MICOM 600 Circuit Switch has recently been upgraded with the installation of new software and hardware allowing for a total of 1100 line/port connections. A high speed trunk (1.544 Mbits/sec) was also successfully installed to the MICOM 600 at Chemical Engineering. This "network" link allows terminals easy access to hosts on either MICOM.

We are currently evaluating a DEC product for VAXes called VAXELN which may be of interest to some clients. VAXELN is a VMS layered software product which supports the development of standalone applications for any VAX computer. Typically, such applications are "real-time" and the product simplifies the design and implementation by offering Pascal as a high level implementation language. We are particularly interested in VAXELN for development of communications facilities. Anyone who may have an interest in VAXELN should contact Arthur Hartwig, extension 4079.

Graham Rees
extension 3288

5.2 MICOM 600

Clients should be aware that the MICOM 600 CIRCUIT SWITCH is taken out of service for testing each Monday morning between the hours of 0700-0800 (Tuesday if Monday is a holiday).

The result of this is that any connections through the MICOM existing at that time will be broken and not restored. Users of the IBM and VAX systems in parti-

cular should be aware of this and ensure that their jobs are logged off before this time.

Graham Jerrard
extension 3168

5.3 KL10 System

The system has been very stable hardware wise over the last month except for a couple of unresolved memory parity errors which caused the system to be unavailable for 30 minutes on Friday 10th August 1984. No cause was found and no recurrences have been experienced to date.

Graham Jerrard
extension 3168

5.4 KL10 Mag Tape System

An as yet unsolved problem exists somewhere in the TU45 Magnetic Tape System which results in a tape job going into a state of "limbo" intermittently. Considerable effort has been expended on this problem by both software and hardware personnel, without the desired "fix" being achieved as yet.

Graham Jerrard
extension 3168

6. Distributed Systems — Geoffrey Dengate, ext. 3391

6.1 DEC Support for RSX-11M

With the advent of RSX-11M-Plus, current users of RSX-11M have expressed some concern about the future support and development that DEC intends for RSX-11M. This topic was discussed at the DECUS Australia Symposium held in Sydney during July, and the following major points emerged.

1. Basically, RSX-11M is now a stable product. It contains the functionality to remain constant, new device support will be provided as appropriate, but no major development work will be performed. However, maintenance updates (i.e. bug fixes) will still be provided.
2. The next update will contain the following features:
   (a) A vectored FCSRES. This means that all entry points to FCSRES will be vectored at standard addresses. This eliminates the need to rebuild all the tasks that use FCSRES, if a change is made to FCSRES.
   (b) Support will be provided for 8-bit ASCII characters.
   (c) A file transfer utility between Micro-RSX and RSX-11M will be provided. This will allow you to transfer files via a terminal line, without the use of DECnet, between your Micro-11 and your mini computer.
   (d) RX02 floppy disks will be supported in 22-bit mode, allowing you to use your existing 18-bit controllers on a system with greater than 256Kb of memory.
3. It is expected that there will be one more update after this one, before

there is a new maintenance release.

4. Some older devices will have support dropped for them. The drivers will still be present, but there will be no support provided. This means, if something goes wrong, we are on our own. The list provided is:

RF-11	series disks
TX-11	series cassettes
TC-11	DECtape
PC-11	paper tape
UDC-11	Universal Digital Controller
VT-11	Graphics display processor
VS-60	Graphics scope
DJ-11	terminal controller

The RK-05 series disks have been marked to have support dropped for them soon.

Danny Smith
extension 2921

7. User Services – Tony Bird, ext. 3944

7.1 Information Concerning Courses

The schedule of courses for the period September-October is as set out below. (Where necessary, additional courses may be added to the list.)

Note: regarding the courses "Introduction to IBM" (4 half days) and "Conversion to IBM" (3 half days):

The "Conversion" course is directed at users with familiarity of some computer system (e.g. PDP-10) and who now wish to make use of the IBM system; the "Introduction" course is intended for new users with no previous computing experience, i.e. it corresponds in function to the "Introduction to PDP-10" course.

One of the two above courses should normally have been completed before attending either the SQL course or the SCRIPT course (just as the "Introduction to PDP-10" course is required before attending courses on PDP-10 packages).

Note on SAS Course:

This course should be regarded as an introduction to SAS rather than a complete exposition of the facilities of this package (see elsewhere in this Newsletter for a description of SAS). As such, it will contain the corresponding type of material at approximately the same level as the SPSS course currently offered, viz., defining variables, setting up a data file, reading values, transformation of data, selection of cases for inclusion in analysis, simple statistical procedures, as well as normal general operational techniques.

September

1022	September 10-14 5 half days 9-12 each day
Typesetting	September 10-13 4 half days 1-4 each day
Introduction to IBM	September 17-20 4 half days 9-12 each day

SPSS	September 17-21 5 half days 1-4.30 each day
Conversion to IBM	September 24-26 3 half days 1-4 each day
TECO Editing	September 27 1 full day 9-12 + 1-4

October

Introduction to PDP-10	October 1-4 4 half days 9-12 each day
SQL	October 8-11 4 half days 9-12 each day
Introduction to IBM	October 8-11 4 half days 1-4 each day
SAS	October 12, 19 & 26 3 full days 9-12 + 1-4 each day
RUNOFF	October 15-18 4 half days 1-4 each day
Conversion to IBM	October 16-18 3 half days 9-12 each day
SCRIPT	October 22-25 4 half days 9-12 each day
Introduction to PDP-10	October 22-25 4 half days 1-4 each day

Notes:

1. All of the above courses will be held in Room G13A – Hawken Building.
2. Enrolments for all courses may be made by phoning extension 3018.

Barry Maher
extension 3021

8. Miscellaneous

8.1 Some more on the Application of Computers in Instrument Control in the Chemistry Department

The article in the Prentice Computer Centre Newsletter N-290 (July 1984) on the Application of Computers in the Chemistry Department can be expanded by the inclusion of the following items:

1) X-Ray Diffractometers

Since 1972 efforts have been directed to automate the departmental two circle diffractometers with a variety of computers such as the NOVA 1200, PDP-8S and PDP-8E. Work is in progress on interfacing an Apple II to this x-ray equipment for data gathering.

2) Carlo-Erba Elemental Analyser

This equipment is in the process of being acquired and installed to carry out analy-

sis on specimens for carbon, hydrogen, nitrogen, oxygen and sulphur content. This machine is interfaced to a High Efficiency Computer and a Cahn Microbalance and it contains its own data handling software.

T.E. Peacock
extension 2362

8.2 Departmental Equipment for Sale

The Philosophy Department has for sale a Hitachi Peach, model MB6890, with two disk drives, double-sided, double-density – $1000. For further details/inspection ring ext. 3748.

Change of Project Programmer Number Expiry Date

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Change Expiry Date to: .....

Signature: .....

Change of Project Programmer Number Expiry Date

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PPN's	SYSTEM (KL-10)
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Change Expiry Date to: .....

Signature: .....